

App. No. 10/750,233  
Amdt. Dated May 20, 2005  
Reply to Office Action of February 22, 2005  
Atty. Dkt. No. 4233-104

### REMARKS/ARGUMENTS

This reply is responsive to an Office Action mailed on February 22, 2005. Reconsideration and allowance of the application and presently pending claims 1-15 are respectfully requested.

#### Present Status of the Patent Application

Claims 1-15 remain pending in the present application. Claims 1-15 have been rejected. Claim 8 has been amended. By the changes in the claims, there is no intent to surrender equivalence.

#### Response to Claim Rejections Under 35 U.S.C. §112

Claim 8 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention by citing two "damper windings." This claim has been appropriately amended. Therefore, the claim is clear and definite as amended.

#### Response to Claim Rejections Under 35 U.S.C. §102

Claims 1-15 stand rejected under 35 U.S.C. §102(b) as being anticipated by Godwin et al. (U.S. Patent No. 3,959,702). Applicant respectfully traverses this rejection.

For a proper rejection of a claim under 35 U.S.C. §102(b), the cited reference must disclose all elements/features/steps of the claim. See, e.g., *E.I. du Pont Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

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The Godwin patent discloses a starting control system for synchronous motors in which the usual separately mounted discharge resistor is eliminated. The motor has a three-phase stator winding and field winding on the rotor. Field excitation is provided by an AC exciter having a field winding on its stator and an armature winding (shown as a three-phase winding) on its rotor. The armature winding is connected to a rectifier bridge to provide a DC output for excitation of the field winding of the motor.

*Independent Claim 1*

Independent claim 1 is shown below:

1. *An electrodynamic machine, comprising:*
  - a stator armature having armature winding means;*
  - a wound rotor having a polyphase winding;*
  - a damper winding on said wound rotor for permitting electric currents to be induced by changes in the magnetic flux linking the rotor magnetic field and the stator armature magnetic field, said electric currents flowing in such a direction as to oppose changes in magnetic flux linkages;*
  - a brushless exciter for providing direct current power to the polyphase rotor winding to cause the machine to function in a synchronous mode of operation; and*
  - a unidirectional device for providing a short circuit to the polyphase rotor winding to enable the machine to function in an induction mode of operation.*

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Applicant believes that Godwin does not disclose, teach, or suggest a device as defined in claim 1.

In regards to the limitations "a stator armature having armature winding means" and "a wound rotor having a polyphase winding", the Office Action has cited col. 7, lines 3-9 of Godwin as follows:

... The exciter may be disposed at the opposite end of the shaft 25 and includes a rotor member 40 cooperating with a stator (not shown) of any suitable type carrying a field winding. The rotor 40 may be of any suitable construction carrying a polyphase armature winding 41 and provided with output leads 42 which extend axially through a bore in shaft 25...

As can be verified from a review of these cited portions of Godwin, the rotor and stator referred to are the rotor and stator for the exciter 13, **not** the synchronous motor 10. Accordingly, the rejection is deficient in this area. Notwithstanding, the undersigned has reviewed the entirety of the Godwin patent and has failed to identify any such teaching anywhere within this reference. Accordingly, the Godwin patent fails to teach or disclose the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

In regard to the limitation "a damper winding on said wound rotor for permitting electric currents to be induced by changes in the magnetic flux linking the rotor magnetic field and the stator armature magnetic field, said electric currents flowing in such a direction as to oppose changes in magnetic flux linkages", the Office Action has cited in Godwin col. 2, lines 22-27 and 34-37; col. 3, lines 36-45:

Field excitation is provided by an alternating current exciter 13 which has a field winding 14 on its stator excited with direct current from any suitable source. The exciter 13 has an armature winding 15, shown as a three-phase winding, carried on the rotor so as to be rotatable with the field winding of the motor...

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The field winding excitation provided by the output of the rectifier 16 is controlled by a solid-state switch or thyristor 17 connected in series between the rectifier output and field winding 12...

... The rotor includes a shaft 25 carrying a plurality of field poles 26 of any suitable construction. The poles 26 are of the usual laminated construction and, as shown in FIG. 3, are mounted by means of dovetails 27 on a spider portion 28 of the shaft. Any suitable or usual type of pole and spider construction may be provided. Each pole 26 has a plurality of damper bars 29 in the pole face, and the bars 29 are connected at the ends by resistance rings 30 to form a damper winding of conventional arrangement.

As can be verified from a review of these cited portions of Godwin, the damper winding is not disclosed on a wound rotor. In fact, the rotors cited by the Office Action for the previous limitation (exciter rotors) are not the same rotors cited for the damper windings (synchronous motor rotors). Furthermore, the rotor for the synchronous motor is described as having a "field winding" not a poly-phase winding. (The exciter's rotor is described as having a poly-phase winding, but does not disclose having any damping windings.) Accordingly, the rejection is deficient in this area. Notwithstanding, the undersigned has reviewed the entirety of the Godwin patent and has failed to identify any such teaching anywhere within this reference. Accordingly, the Godwin patent fails to teach or disclose the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

In regards to the limitation "a unidirectional device for providing a short circuit to the polyphase rotor winding to enable the machine to function in an induction mode of operation", the Office Action has cited in Godwin Figs. 1 – references 18-21 and 23; col. 3, lines 10-20:

The control circuit 21 senses the proper point as indicated by the slip frequency and phase angle of the induced voltage, the thyristor 17 is fired to apply direct current excitation from the rectifier 16 to the field winding

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12. Since the induced voltage across the field winding drops to essentially zero as the motor reaches synchronism, the Zener diode 23 will become non-conductive and prevent firing of the thyristor 19 so that the discharge resistor 18 is disconnected from the field winding. The motor is then in its normal operating condition and will pull into step and run as a synchronous motor.

As can be verified from of this cited portion of Godwin, the device described above in Godwin does not provide "a short circuit" or provide it "to a polyphase rotor winding." In Godwin, discharge resistor 18 (not a short circuit) is placed across the rotor's field winding (not a polyphase rotor winding). Furthermore, the discharge resistor of Godwin is "connected across the field winding 12 in order to limit the high induced voltage in the field winding and to increase the starting torque" (col. 2, lines 39-42), not "to enable the machine to function in an induction mode of operation." Accordingly, the rejection is deficient in this area. Notwithstanding, the undersigned has reviewed the entirety of the Godwin patent and has failed to identify any such teaching anywhere within this reference. Accordingly, the Godwin patent fails to teach or disclose the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

#### *Independent Claim 8*

Independent claim 8, as amended, is allowable for at least the reason that Godwin does not disclose, teach, or suggest the invention as described above regarding claim 1. Accordingly, the Godwin patent fails to teach or disclose the invention as defined by claim 8, and the rejection of claim 8 should be withdrawn.

#### *Independent Claim 9*

Independent claim 9 is allowable for at least the reason that Godwin does not disclose, teach, or suggest the invention as described above regarding claim 1.

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Accordingly, the Godwin patent fails to teach or disclose the invention as defined by claim 9, and the rejection of claim 9 should be withdrawn.

*Dependent Claims*

Dependent claims 2-7 and 10-15 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 1 and 9, respectively. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

**CONCLUSION**

The other cited art of record has been reviewed, and it is believed that the claims as amended patentably distinguish thereover.

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and rejections have been traversed, rendered moot, and/or accommodated, and that now pending claims 1-15 as amended are in condition for immediate allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at 619-231-3666.

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Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date: 5-20-2005

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